PUGET SOUND ENERGY, INC.

PROOF

If book value exceeds market price,
the market-to-book ratio is less than 1.0,
and the earnings-price ratio exceeds the cost of capital.

MP = market price
BV = book value
i = cost of equity capital
r = earned return
E = earnings

1. At MP = BV, $i = r = \frac{E}{MP}$.
2. E = rBV.
3. Then, $\frac{E}{MP} = \frac{rBV}{MP}$.
4. When BV > MP, i.e., $\frac{BV}{MP} > 1$, then,

   a. $\frac{E}{MP} > r$, since $\frac{E}{MP} = \frac{rBV}{MP} > r$, because $\frac{BV}{MP} > 1$;

   b. $i > r$, since at $\frac{BV}{MP} = 1$, $i = \frac{E}{MP} = \frac{rBV}{MP}$, but if $\frac{BV}{MP} > 1$, then $i > r$; and

   c. $\frac{E}{MP} > i$, since at $\frac{BV}{MP} = 1$, $i = \frac{E}{MP} = \frac{rBV}{MP}$, but if $\frac{BV}{MP} > 1$, then $\frac{E}{MP} > i$, because,

      1) $\frac{BV}{MP} > 1$, through MP decreasing, and, if so, $\frac{E}{MP}$ increases, therefore, $\frac{E}{MP} > i$, or

      2) $\frac{BV}{MP} > 1$, through BV increasing, and, if so, given E = rBV, $\frac{E}{MP}$ increases, therefore, $\frac{E}{MP} > i$.

5. Ergo, $\frac{E}{MP} > i > r$, the cost of capital exceeds the earned return.